

REMARKS

Claim Rejections – 35 U.S.C. 102(a)

Claims 1 – 34 are rejected under 35 U.S.C. 102(a) as being anticipated by Howe et al.

5 Response

Claim 1

10 Howe discloses a hard disk storage device having firmware partitioned into a first portion stored in a flash ROM of an electronics card and a second portion stored in disk media of a disk enclosure [col. 3, lines 20-29]. However, the applicants assert that Howe merely discloses a peripheral device (i.e. a disk drive), and fails to teach the claimed electronic system including a host device and a peripheral device. Additionally, using the combination of the electronics card and the disk enclosure to anticipate the claimed electronic system including a host device and a peripheral device is improper. The rationale is given as below.

15 According to Howe's disclosure, the electronics card shown in Fig. 2A includes a microprocessor for accessing and executing the first firmware portion in the flash ROM and the second firmware portion in the SRAM loaded from the disk media of the disk enclosure shown in Fig. 2B; and the disk enclosure shown in Fig. 2B has an arm electronics acting as a data read/writing controller of the storage disks. Therefore, only
20 the electronics card has the program execution capability, and the disk enclosure is controlled by the electronics card through the servo processor/control logic. Though the disk enclosure is controlled by the electronics card, this does not anticipate the claimed feature " the peripheral device comprising a **control circuit for executing a first program code** to control operations of the peripheral device according to an instruction
25 from the host device".

Furthermore, Howe teaches using the disk media of the disk enclosure to store a second firmware portion and a copy of a first firmware portion compatible with the second firmware portion; and then comparing identifiers of the firmware portions in the flash ROM and SRAM to determine if the first firmware portion in the flash ROM is compatible with the second firmware portion in SRAM. If incompatibility is found, the incompatible first firmware portion in the flash ROM is directly replaced with a copy of a compatible first firmware portion stored in the disk media of the disk enclosure. Therefore, Howe does not teach verifying the copy of a compatible first firmware portion before the replacement occurs. In short, the claimed feature “executing an inspection step before the second program code replaces the first program code of the peripheral device to check whether partial content of the second program code conforms to a predetermined content” is neither taught nor suggested by Howe.

In light of the above arguments, the applicants assert that Howe fails to teach using a host device to verify a second program code before updating a first program code stored in a peripheral device by the second program code, where the peripheral device is capable of executing the program code stored therein to perform its designed functionality in response to instructions from the host device. As Howe fails to teach all of the limitations recited in Claim 1, the applicants therefore believe Claim 1 has been placed in condition for allowance. Reconsideration of Claim 1 is respectfully requested.

Claim 2

Claim 2 is dependent on Claim 1. The applicants therefore believe Claim 2 should be found allowable.

Claim 3

As Howe does not teach executing an inspection step upon the second program code used for replacing the first program code, and as Claim 3 is dependent on Claim 1, the

applicants believe Claim 3 should be found allowable.

Claims 4 – 6

Claims 4 – 6 are dependent on Claim 1. As the applicants believe Claim 1 has been placed in a position for allowance, claims 4 – 6 should also be found allowable.

5 Claim 7

Claim 7 discloses the limitation ‘ceasing to replace the first program code with the second program codeif partial content of the second program code does not conform to the predetermined content’. However, Howe only teaches replacing the incompatible first program code with a copy of the compatible program code if the comparison result is
10 negative. In short, the applicants’ disclosure teaches an updating mechanism, while Howe’s disclosure teaches a recovering mechanism. The applicants therefore believe Howe teaches against the method of Claim 7 and Claim 7 should therefore be found allowable.

Claim 8

15 Claim 8 has been amended to correct a typographical error. As the second program code of Claim 1 is not a copy of the first program code, and replacement only occurs if a comparison result is positive, the applicants believe that Claim 8 should be found allowable.

Claim 9

20 According to the above arguments under Claim 1, the applicants assert that Howe merely discloses a peripheral device (i.e. a disk drive), and fails to teach the claimed electronic system including a host device and a peripheral device; and Howe also fails to teach verifying the copy of a compatible first firmware portion before the replacement of

the incompatible first firmware portion occurs. Additionally, as Howe does not disclose the claimed host device, the claimed feature “transmitting a second program code from the host device to the peripheral device” is neither taught nor suggested by Howe. In light of these arguments, the applicants believe Claim 9 should be found allowable.

5 Reconsideration of Claim 9 is respectfully requested.

Claim 10

Claim 10 should be found allowable for the same reasons detailed under the response to Claim 2.

Claim 11

10 Claim 11 should be found allowable for the same reasons detailed under the response to Claim 3.

Claims 12 – 14

Claims 12 – 14 are dependent on Claim 9 and should be found allowable if Claim 9 is found allowable.

15 Claim 15

Claim 15 should be found allowable for the same reasons detailed under the response to Claim 7.

Claim 16

20 Claim 15 should be found allowable for the same reasons detailed under the response to Claim 8.

Claims 17 – 19

Claims 17 – 19 are dependent on Claim 9 and should be found allowable if Claim 9 is found allowable.

Claim 20

5 Howe teaches using the disk media of the disk enclosure to store a second firmware portion and a copy of a first firmware portion compatible with the second firmware portion; and then comparing identifiers of the firmware portions in the flash ROM and SRAM to determine if the first firmware portion in the flash ROM is compatible with the second firmware portion in SRAM. If incompatibility is found, the incompatible first
10 firmware portion in the flash ROM is directly replaced with a copy of a compatible first firmware portion stored in the disk media of the disk enclosure. Therefore, Howe does not teach verifying the copy of a compatible first firmware portion before the replacement occurs. In short, the program code in SRAM compared with the program code in the flash ROM is not used to update the program code in the flash ROM when incompatibility is
15 found; therefore, the claimed feature “check whether partial content of the second program code conforms to a predetermined content before the control circuit replaces the first program code with a second program code” is neither taught nor suggested by Howe. For these reasons, the applicants believe Claim 20 should be found allowable.

Claim 21

20 Claim 21 should be found allowable for the same reasons detailed under the response to claims 2 and 10.

Claim 22

Claim 22 should be found allowable for the same reasons detailed under the response to claims 3 and 11.

Claims 23 – 25

Claims 23 – 25 are dependent on Claim 20 and should be found allowable if Claim 20 is found allowable.

Claim 26

- 5 Claim 26 should be found allowable for the same reasons detailed under the responses to claims 7 and 15.

Claim 27

Claim 27 should be found allowable for the same reasons detailed under the responses to claims 8 and 16.

10 Claim 28

Claim 28 is dependent on Claim 20 and should be found allowable if Claim 20 is found allowable.

Claim 29

- 15 According to the arguments stated above, Howe merely discloses a peripheral device (i.e. a disk drive), and fails to teach the claimed electronic system including a host device and a peripheral device. Additionally, Claim 29 is dependent on Claim 20 and should be found allowable if Claim 20 is found allowable.

Claim 30

- 20 Claim 30 is dependent on Claim 20 and should be found allowable if Claim 20 is found allowable.

Claim 31

Appl. No. 10/605,560
Amdt. dated March 19, 2007
Reply to Office action of December 19, 2006

Claim 31 should be found allowable for pertinent reasons detailed in the response to claims 1 and 9. Reconsideration of Claim 31 is respectfully requested.


Claims 32 – 34

5 Claims 32 – 34 are dependent on Claim 31 and should be found allowable if Claim 31 is found allowable.

The applicants respectfully request that a timely Notice of Allowance be issued in this case.

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Sincerely yours,



Date: 03/19/2007

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20 Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.)